Real-Time, Interactive and Personalized Video Services

Technical Field

This invention relates to communication services. Particular aspects of the invention relate to providing a user interface for real time, interactive video services and to providing personalized betting services.

Background Art

During the last few decades, same-time-same-place gambling has been complemented by same-time-different-place activities. Telephone betting has a long history that includes activities that have been proscribed (*e.g.*, starting price or S.P. bookies), that have been approved (*e.g.*, on-course bookies), and, in some countries, that have been State-conducted (*e.g.*, phone-betting with State Government Totalizator Agency Boards or TABs).

It has long since been recognized that the virtualization of gambling could result in major changes to society. Whereas in 1975 few people might have contemplated a future in which bets could be placed on which member of the British Royal Family would die next, or on which state would next erupt in civil war, such bets can now be placed in the United Kingdom and in several other nations around the world. Betting houses offering such services are becoming readily accessible on the Internet. (See, for example, www.casinos-gambling.com/osbooks.htm.) Additionally, interactive networks are emerging from several hitherto separate technologies, for example, cable transmission, growing out of cable-TV, where the capacity of the connection is typically split between high-bandwidth down-channels and low-bandwidth up-channels. The Internet, with connection to the home and most workplaces via a conventional public switched telephone network (PSTN) can also be used.

Gambling is increasingly becoming a major feature of interactive networks. So much

so, it appears to be one of the largest sources of revenue generation on the Internet. Use of the Internet for gambling is especially significant because it is fully operational, it uses an existing and pervasive infrastructure, and its market reach is already very wide. In addition to its physical advantages the growth rate of the Internet is dramatic and it is intrinsically extra-, and even supra-jurisdictional, making it extremely resistant to existing regulatory frameworks.

Satellite and cable infrastructures may be used to operate services independent from the Internet. It is important to note, however, that they are also entirely capable of being used as carrier mechanisms for Internet traffic, and indeed to support both proprietary and Internet channels at the same time. If satellite and/or cable come to supplant the public switched telephone network (PSTN) carried Internet, it will not necessarily supplant the Internet itself.

Digital television provides more channels at a higher quality than is currently available with analog broadcasts. One analog channel provides the capacity for one high-definition television (HDTV) broadcast or several standard definition television (SDTV) broadcasts. Digital television is scalable between these two extremes. Therefore, digital broadcasters can make a trade-off between vastly improved image and sound quality and an increased number of programming choices.

Digital television is deliverable to moving receivers. Currently, analog television reception is non-existent or severally limited in moving receivers. However, digital receivers allow for clear reception in cars, buses, trains, and in handheld television sets such as the Sony Watchman™. With a Global System for Mobile Communication (GSM) mobile phone connected to a laptop and a DVB-T (terrestrial) receiver plug-in card, browsing the web at speeds of 2-14 Mb/s is possible.

Most of the equipment used to create, edit, and distribute television programs is now digital. The analog reception of a television signal, via cable, aerial, or satellite, is the end result of a long chain of events, most of which have taken place in the digital domain. For example, in delivering a new broadcast, the field reporter uses digital satellite news gathering equipment to uplink her report to a programming center. The material is digitally received,

decoded, and compiled with live program feeds in a studio. The broadcast is then sent digitally around the world to professional receivers. Finally, the broadcast is converted to an analog signal and sent to the end viewer.

A typical television video circuit includes a tuner that receives the RF signals from an antenna or cable port. The tuner selects a particular frequency of the RF signal representing a viewing channel. The selected channel frequency from the tuner is processed through an IF amplifier and detector that amplifies the selected channel and reduces its frequency to a baseband video signal. A National Television Standards Committee (NTSC) decoder receives the baseband video signal from Intermediate Frequency (IF) amplifier and detector and separates the RGB signals according to the NTSC format. A microprocessor controls the tuner, IF amplifier, and NTSC decoder.

It is common in modern television receivers to provide functions such as picture-in-picture (PIP), enhanced audio, and other special features, as options. Current television receivers incorporate such modules on a hard-wired basis. The PIP feature requires a composite video signal from a source other than the television tuner. The signal from that external video source is displayed on a selected portion of the cathode ray tube (CRT) viewing screen along with the main video signal.

An intelligent TV is for receiving communication services by connecting a TV to a value added network (VAN). The intelligent TV includes an information signal processing unit for receiving information communication data (hereinafter, "information data") when the intelligent TV is connected to the VAN, and for generating information RGB signals, and switching control signals in order to display the information data on a screen. The intelligent TV selects and displays on the screen one of the information data signals processed in the information signal processing unit and a TV RGB signal processed in a TV signal processing unit, in accordance with the switching control signal output from the information signal processing unit. Intelligent TV makes it possible to view, through a TV screen, several communication services, such as stock quotes, news services, weather reports, and TV program lists, being transmitted through the VANs. Therefore, it has an advantage that